

OPTICAL DEVICES FOR MEDICAL DIAGNOSTICS

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ABSTRACT

The invention discloses apparatus and methods that combine
fluorescence spectra, Raman spectra, and diffuse reflectance, with image
10 analysis in a single instrument package along with algorithms and data
processing software. The data processing software involves spectral analysis,
image analysis, data compression, data fusion, and classification processes. A
spectral database with optical tissue characteristics is developed from a
pathology laboratory and/or from in vivo measurements to provide the
15 information required to differentiate normal and abnormal tissue.